

WHAT IS CLAIMED IS:

1                   1. A method of generating pixels in a graphics system comprising:  
2                   providing a plurality of sub-samples;  
3                   providing a source pixel;  
4                   determining which of the plurality of sub-samples are covered by the source  
5                   pixel, and which of the plurality of sub-samples are not covered by the source pixel;  
6                   filtering the sub-samples which are covered by the source pixel;  
7                   blending the filtered sub-samples with the source pixel to create a blended  
8                   sub-sample; and  
9                   filtering the sub-samples which are not covered by the source pixel together  
10                  with the blended sub-sample.

1                   2. The method of claim 1 wherein the filtering the sub-samples which are  
2                   covered by the source pixel, is done by averaging the sub-samples which are covered by the  
3                   source pixel.

1                   3. The method of claim 2 wherein the filtering the sub-samples which are  
2                   not covered by the source pixel together with the blended sub-sample, is done by averaging  
3                   the sub-samples which are not covered by the source pixel together with the blended sub-  
4                   sample.

1                   4. The method of claim 3 further comprising before the filtering the sub-  
2                   samples which are not covered by the source pixel together with the blended sub-sample,  
3                   weighting the blended sub-sample.

1                   5. The method of claim 4 further comprising before weighting the  
2                   blended sub-sample, determining the number of covered sub-samples,  
3                   and wherein the weighting of the blended sub-sample is done by multiplying  
4                   the blended sub-sample by number of covered sub-samples.

1                   6. The method of claim 1 further comprising replacing the sub-samples  
2                   which are covered by the source pixel with the blended sub-sample.

1                   7. An apparatus for generating pixels in a graphics system comprising:  
2                   a memory for storing and providing sub-samples;

3                   a graphics pipeline for providing an image, and determining which sub-  
4   samples are covered by the image, and which sub-samples are not covered by the image;  
5                   a first filter for filtering covered sub-samples and providing a first filter  
6   output;  
7                   a blender for blending the image with the output of the first filter and  
8   providing a blender output;  
9                   a second filter for filtering the blender output with the sub-samples which are  
10   not covered by the image.

1                   8.       The apparatus of claim 7 wherein the first filter and the second filter  
2   are averaging circuits.

1                   9.       The apparatus of claim 8 wherein the second filter is also for weighting  
2   the blender output.

1                   10.      The apparatus of claim 7 wherein the blender output provides a new  
2   sub-sample, and where the new sub-sample replaces in memory the sub-samples covered by  
3   the image.

1                   11.      An apparatus for generating pixels in a graphics system comprising:  
2   a sub-sample memory having an first output and a second output;  
3   a first filter having an input coupled to the first sub-sample memory output;  
4   a blender having an output, a first input, and a second input, the first input  
5   coupled to the first filter output;  
6   a graphics pipeline having an output coupled to the second blender input; and  
7   a second filter having a first input and a second input, the first input coupled to  
8   the second sub-sample memory output and the second input coupled to the blender output.

1                   12.      The apparatus of claim 11 wherein the sub-sample memory stores a  
2   plurality of sub-samples which are associated with a pixel, and wherein the graphics pipeline  
3   provides a source pixel, and determines which of the sub-samples associated with the pixel  
4   are covered by the source pixel, and which of the sub-samples associated with the pixel are  
5   not covered by the source pixel.

1                   13.      The apparatus of claim 12 wherein the sub-sample memory outputs on  
2   the first sub-sample memory output the sub-samples associated with the pixel which are

3 covered by the source pixel, and outputs on the second sub-sample memory output the sub-  
4 samples associated with the pixel which are not covered by the source pixel.

1 14. The apparatus of claim 13 wherein first filter averages the sub-samples  
2 at its input, and outputs an average, and the blender blends the signals at its inputs, and  
3 outputs a blend.

1 15. The apparatus of claim 14 wherein the second filter filters the sub-  
2 samples at its first input and the blend at its second input.

1 16. The apparatus of claim 15 wherein the second filter further comprises  
2 an output for providing a pixel.

1 17. A computer system comprising:  
2 a central processing unit (CPU);  
3 a main memory coupled to the CPU; and  
4 an apparatus for generating pixels in a graphics system as set forth in claim 11,  
5 coupled to the CPU.

1 18. An apparatus for generating pixels in a graphics system comprising:  
2 a memory for storing sets of a first number of sub-samples, where each set of  
3 sub-samples is associated with a pixel;  
4 a second number of filters, each filter coupled to the memory; and  
5 a third number of blenders, each coupled to one of the second number of  
6 filters,  
7 wherein the third number is less than the first number.

1 19. The apparatus of claim 18 wherein the third number is one.

1 20. The apparatus of claim 19 wherein the first number is 4.

1 21. The apparatus of claim 19 wherein the first number is 8.

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